AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows:

1. (Currently Amended) A method of controlling a local process that forms part of a first processing entity, said first processing entity maintaining a plurality of associations with a plurality of remote processes in a second processing entity, said method comprising the steps of:

- receiving at a computer executing the local process a failure message from a remote process in the second processing entity indicating a fault affecting an association linking the local process with that remote process;

- queuing, at the computer executing the local process, data messages destined for that remote process, the data messages queued according to the order in which they are received at the computer;

- ~~verifying during a timer period that data messages previously sent using the fault-affected association have been received by the remote process;~~

- controlling the transmission of an acknowledgement of the failure message at the computer executing the local process so that data messages pending on the association are ensured as received in sequence before acknowledgement of the failure message~~, based on said verifying within the timer period~~; and

- initiating a traffic diversion to set up an alternate path between said local process of said first processing entity and said second processing entity for queued data messages, with said initiating comprising testing of a data type value of the queued data messages and, based on the data type value test result, either finding an alternate local process for transmitting queued data messages to the remote process or forwarding data to an alternate remote process serving the remote processing entity.

2. (Original) A method as claimed in claim 1 wherein the controlling comprises delaying the acknowledgment of the failure message.

3. (Previously presented) A method as claimed in claim 2 wherein the delay is for a predeterminable time period that estimates enough time for verifying.

4. (Original) A method as claimed in claim 2 wherein the delay is determined by transmission and acknowledgment of a heartbeat message.

5. (Original) A method as claimed in claim 1 wherein the controlling comprises sending the acknowledgement of the failure message on the data stream used for the data messages.

6. (Previously Presented) A method as claimed in claim 1 comprising testing the association to determine if the association is active and, if not, dropping messages queued for the association.

7. (Currently amended) A method as claimed in claim 1 wherein <u>the local process is one of a plurality of local processes of the first processing entity and each of the local processes is connected to each of the remote processes of the second processing entity through a plurality of associations.</u> ~~the first processing entity maintains a plurality of associations between a plurality of local processes and a plurality of remote processes.~~

8. (Currently amended) A method as claimed in claim 7 comprising informing other local processes of the fault so that such other local processes can avoid involving the failed association in traffic diversion procedures initiated by ~~them~~ <u>those other local processes</u>.

9. (Original) A method as claimed in claim 7 or claim 8 comprising determining whether pending messages form part of a stateful transaction, and, if so, finding an alternative local process to provide an alternative path to the same remote process.

10. (Original) A method as claimed in claim 9 wherein the determining comprises determining whether the messages are TCAP messages.

11. (Original) A method as claimed in claim 7 or claim 8 comprising determining whether pending messages form part of a stateless transaction, and, if so, finding an alternative path through the same local association to another remote process.

12. (Currently amended) A method as claimed in claim 11 wherein the determining comprises determining whether the messages are non-TCAP messages.

13. (Previously Presented) A method as claimed in claim 1 wherein the traffic diversion comprises modifying routing tables.

14. (Previously Presented) A method as claimed in claim 1 wherein the first processing entity is a signalling gateway, the local processes being signalling gateway processes having a common point code or set of point codes.

15. (Previously Presented) A method as claimed in claim 1 wherein the second processing entity is an application server, the remote processes being application server processes having a common routing key.

16. (Currently amended) A method as claimed in claim 15 wherein the message indicating the fault is an ASP_INACTIVE or ASP_DOWN message and the acknowledgement ~~being~~ is respectively an ASP_INACTIVE_ACK message or an ASP_DOWN_ACK message.

17. (Previously Presented) A method as claimed in claim 1 further comprising the initiating of a switch back procedure to include a new association linking a local process with a remote process.

18. (Original) A method as claimed in claim 17 comprising informing other local processes of the new association so that such other local processes can begin involving the new association.

19. (Previously Presented) A method as claimed in claim 1 wherein the associations are SCTP associations.

20. (Previously Presented) A computer readable storage medium embedded with computer code for controlling a local process using a method as claimed in claim 1, wherein the computer code is executed by a computer to perform said method.

21. (Previously Presented) A signalling gateway comprising a plurality of local processes that are controlled using a computer program code as claimed in claim 20.

22. (Currently Amended) A method of recovering failure in a distributed signalling gateway maintaining a plurality of associations between a plurality of signalling gateway processes of said distributed signalling gateway and a plurality of application server processes of an application server, said method comprising the steps of:

- initiating a traffic diversion in response to a failure message to set up an alternate path between said signalling gateway processes and said application server processes in case of fault affecting an association between a first application server process and a first ~~signaling~~ signalling gateway process, said initiating comprising[[:]] testing of a data type value of the queued data messages and, based on the data type value test result, either finding an alternate signalling gateway process for transmitting queued data messages to the application server process or forwarding data to an alternate application server process serving the application server;

- initiating a switch back to include a new association linking the first signalling gateway process and the first application server process, the initiating a switch back comprising:

    - sending from the first signalling gateway process to at least one of the other signalling gateway processes a first inter-signalling gateway process control signal to flush messages to the first application server process on any diversion path associated with that other signalling gateway process;

    - verifying by a second a inter-signalling gateway process control signal that messages on diversion paths associated with the at least one other ~~signaling~~ signalling gateway process ~~processes~~ have been received by application server processes; and

    - controlling an active message acknowledgement by the first ~~signaling~~ signalling gateway process, based on said verifying ~~within the timer period~~;

- according to the change of status of any association, updating routing tables capable of routing data messages received by said signalling gateway processes to its destined application server processes; and

- distributing sequentially messages from said signalling gateway to said plurality of application server processes according to said routing tables.

23. (Currently amended) The method as claimed in claim 22 wherein said step of initiating a traffic diversion further ~~comprising~~ comprises the steps of:

- starting a protection timer;

-queuing messages destined for the application server process of the failed association;

- informing other signalling gateway processes of the fault so that other signalling gateway processes can avoid involving the failed association in a traffic diversion procedure initiated by them;

- controlling the transmission of an acknowledgement of the failure message so that data messages pending on the association are received at the application server process before the acknowledgement; and

- finding an alternate path to forward subsequent stateless processing messages onto another application server process through another association or to forward subsequent stateful processing messages through an alternate signalling gateway process still associated with the same application server process.

24. (Currently amended) The method as claimed in claim 23 wherein said step of finding an alternate path to forward subsequent stateless or stateful processing messages further ~~comprising~~ comprises the steps of:

- re-computing said routing tables for said application server if the traffic is carrying stateless processing messages[[,]];

- sending messages according to said newly updated routing tables if there are still ~~entry~~ active entries left in said routing tables and continuing to ~~process~~ send messages until no active entry is left in said routing tables; and

- finding an active signalling gateway process to divert the traffic for said application service process if the traffic is carrying stateful processing ~~message~~, <u>messages</u> and sending said stateful processing messages onto said signalling gateway process through said alternate path.

25. (Previously presented) The method as claimed in any of claims 22 to 24 wherein said step of initiating a switch back to include a new association further comprises the steps of:

- starting a protection timer further to the reception of an association activation;

- queuing data messages destined to the application server process of the new association;

- controlling the transmission of an acknowledgement of the association activation so that all diverted data messages have been transmitted via a diversion path;

- informing other signalling gateway processes of said new association; and

- re-computing said routing tables.

26. (Previously Presented) The method as claimed in claim 22 wherein said signalling gateway is coupled to a signalling end point across a signalling system No. 7 network.

27. (Previously Presented) The method as claimed in claim 22 wherein each signalling gateway process of said signalling gateway is coupled to each application server process across an internet protocol network.

28. (Previously Presented) The method as claimed in claim 23 wherein said stateful and stateless processing messages are respectively TCAP and non-TCAP messages identified by transaction identification numbers.

29. (Previously Presented) The method as claimed in claim 22 wherein said routing tables used for distributing signalling messages from said plurality of signalling gateway processes to said plurality of application server processes are SLS routing tables.